UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,186	10/05/2005	Detlef Rehorek	JMYT-345US	4922

23122 7590 07/22/2009
RATNERPRESTIA
P.O. BOX 980
VALLEY FORGE, PA 19482

EXAMINER	
TRAN, BINH X	

ART UNIT	PAPER NUMBER
1792	

MAIL DATE	DELIVERY MODE
07/22/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,186	REHOREK ET AL.	
	Examiner	Art Unit	
	Binh X. Tran	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 May 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-4, 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tunker (US 5,443,669) in view of Peer (WO 97/36836).

Respect to claims 1-2, Tunker discloses an ink comprising a glass frit, a pigment, an organic vehicle (i.e. screen printing oil), and an oxidizing agent (i.e. lead dioxide, or manganese oxide) (See col. 2-4).

Tunker fails to disclose the oxidizing agent comprises bismuth salt of nitric acid selected from $BiONO_3$, $Bi_5O(OH)_9(NO_3)_4$, $BiONO_3.H_2O$ and $Bi(NO_3)_3xH_2O$. Peer

teaches to use an oxidizer (or modifier) includes $Bi(NO_3)_3.5H2O$ in order to prevent other chemical from being reduced (abstract, page 15, 17). Peer further discloses $Bi(NO_3)_3.5H_2O$ is preferred (page 17). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Tunker in view of Peer by using $Bi(NO_3)_3.5H_2O$ because it will prevent other chemical such as lead oxide from being reduced.

Respect to claim 3, Peer discloses to use the oxidizing agent at the amount range from 0.25 to about 1wt% (page 20 lines 1-3, read on applicant's range). Respect to claim 4, Tunker discloses the glass frit is lead borosilicate (col. 4 lines 50-55). However, Tunker fails to disclose the softening point of lead borosilicate glass. Softening point is a property of glass material. According to MPEP 2112.01 "Products of identical chemical composition can not have mutually exclusive properties. A chemical composition and its properties are inseparable". It is known in the art that lead borosilicate glass has a softening point of 500 °C or less (read on applicant's range; See evidence by Goda et al. US 2002/0135281 paragraph 0024).

Respect to claims 6-7, Tunker teaches to use 28 wt% of copper chrome (See table in col. 4). Respect to claim 8, Tunker disclose the seed material selected from the group consisting of silica, other glass frits and pigments (See col. 3 lines 26-40, lines 56-64). Respect to claim 9, Tunker discloses the seed material (silicate) comprises about 4 wt% (See col. 4 lines50-57). Respect to claim 10, Tunker discloses the organic vehicle comprises a screen printing medium (col. 4 lines 45-67).

Respect to claims 11-12, Tunker discloses a laminated glass substrate coated or decorated using the ink. Respect to claim 13, Tunker discloses a method for applying a ceramic ink to substrate following by drying and firing using the ink as discussed above. Respect to claim 14, Tunker discloses the substrate is glass.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tunker and Peer as applied to claims 1-3, 6-14 above, and further in view of Nagai et al. (US 2002/0146569 A1).

Respect to claim 5, Tunker fails to disclose the glass frit comprises a bismuth containing frit. However, Peer clearly teaches to add bismuth containing compound into the glass. Nagai teaches to add bismuth containing frit in order to control the softening point (paragraph 0040). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Tunker and Peer in view of Nagai by using bismuth containing frit because it helps to control the softening point of the glass.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tunker and Peer as applied to claims 1-3, 6-14 above, and further in view of Goda et al. (US 2002/0135281 A1).

Respect to claim 5, Tunker fails to disclose the glass frit comprises a bismuth containing frit. However, Peer clearly teaches to add bismuth containing compound into the glass. Goda teaches to add bismuth containing frit in order to control the softening point (paragraph 0024). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Tunker and Peer in view of Goda by using bismuth containing frit because it helps to control the softening point of the glass.

Response to Arguments

5. Respect to previous 35 USC 112, 2nd paragraph rejection, applicant's amendment filed on 5-11-2009 along with the remark is sufficient to overcome the examiner previous ground of rejection under 35 USC 112.

Respect to previous 35 USC 103 rejection, the applicants state "the alternative reason provided in the Office Action is "or prevent other chemical from being reduced." It is not just any chemical being reduced which is the concern in Peer. As discussed above, Peer is solving the problem of reduction of PbO containing sealing glass to metallic lead. While Peer discloses $Bi(NO_3)_3.5H_2O$ as a modifier, its function is to prevent PbO from being reduced to metallic lead". The applicants further state "The oxidizing agents described in T0nker would not be a concern because it is necessarily replaced by $Bi(NO_3)_3.5H_2O$ as the oxidizing agent in the claimed invention. The other lead compound disclosed in Tunker, lead borosilicate glass, is known in the art to be a stable glass, and thus, reduction of it is not a concern." The examiner disagrees. Peer clearly the advantage of using $Bi(NO_3)_3.5H_2O$ in order to prevent lead oxide from being reduce to metallic lead. The examiner still concludes that it is obvious to use modify Tunker composition by adding $Bi(NO_3)_3.5H_2O$ because it of the advantage disclosed by Peer.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was

within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that Peer is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Peer discloses a glass modifier composition, wherein the applicant's composition also comprises a glass frit.

The applicants further argue that "in the present invention, the inks are lead-free , do not undergo a reduction step, and accordingly, there is no concern for reduction of a PbO constituent to metallic form". In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the inks are lead-free , do not undergo a reduction step) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh X. Tran whose telephone number is (571)272-1469. The examiner can normally be reached on Monday-Thursday and every other Friday.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Binh X Tran
Primary Examiner
Art Unit 1792

/Binh X Tran/
Primary Examiner, Art Unit 1792